

PINE Motion Controller

Firmware Update Guide

Valid for: PINE, PINE LITE, PINE R
Release Date: 18. May 2019
Revision: 2

1. Introduction

This document explains how you can update the firmware of the PINE Motion Controller.

As the software of the controller is always being developed further by us to improve overall user experience and introduce new features, firmware updates are a way to give our PINE users access to the newest software releases.

Firmware updates are always optional, but we recommend using always the latest releases, so you get access to the newest features.

Most firmware updates also require the latest PINE Motion App updates for Android and iOS in order to obtain access to the new features. Always make sure you are using the newest apps available in the Google Play and App Store.

2. Activating the Firmware Update Mode on PINE

Before you can update the firmware, the PINE Controller needs to be set to a special Firmware Update Mode.



Only activate the Firmware Update Mode when you really intend to update the firmware of the controller.

The controller is completely unfunctional once it is in the Update Mode and will only be functional again after a new firmware has been uploaded.

We also recommend that you first install and launch the Update Utility Software listed under Chapters 3 or 4 before activating the Firmware Update Mode.

- I. Connect a suitable USB cable to the PINE Controller (micro USB) and your computer.

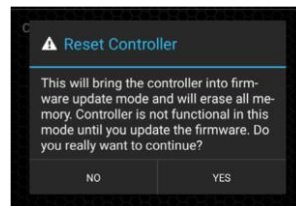


Make sure you are using a proper USB cable and not one only capable of supplying power. If firmware updates keep failing, try a different USB cable.

- II. Plug in the power supply for the Controller
- III. Connect to the Controller with the PINE Motion App
- IV. Go to the "Connections" Section

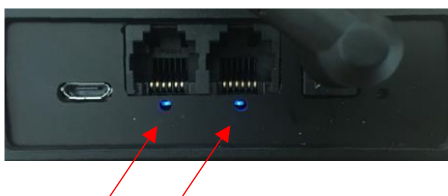


- V. Tap the  Symbol and confirm the appearing Dialog



- VI. The PINE Controller should now be in Firmware Update Mode and is ready to receive a new firmware. The blue LEDs on the controller should be on slightly to indicate the update mode.

The controller will now be unfunctional until a new firmware has been uploaded.



3. Updating on Windows

For Windows, we have our own Firmware Updater Utility for the PINE Controller.

Go to the Downloads section on our website to download the Updater Utility for Windows.

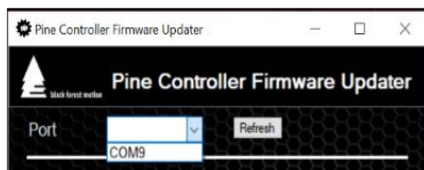
Install the Utility Software by launching the setup.exe file in the ZIP folder you downloaded. You might need to give permission to install 3rd party apps during the installation process.

Some versions of Windows might require **additional USB drivers**, so the updater utility can detect the PINE Controller. If you are having problems detecting the controller via USB, install the Windows drivers found in our Downloads section. Updates under Windows 10 should work right away without installing any additional drivers, however, on older operating systems, you will likely need to install those drivers.

- I. With your PINE Controller still connected via USB to your computer (and powered over the DC connector), launch the Updater Utility.

If you disconnected power from the controller after activating the Update Mode over the App, always first connect the USB cable to the controller and your computer, then connect the power supply.

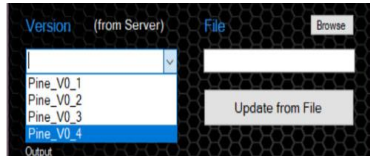
- II. Expand the Ports List and select the COM port. If the list is empty, click the “Refresh” Button



III. There are 2 options to select the Firmware File:

a. Update from Server

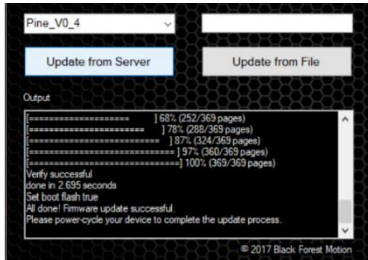
The newest Firmware file is always stored on our server and the update utility will access it and install on the controller after clicking the “Update from Server” button. This option requires an active internet connection.



b. Update from File

Alternatively, you can download the Firmware files from our Downloads section, select their storage location with the “Browse” button, and then install it to the controller after clicking the “Update from File” button.

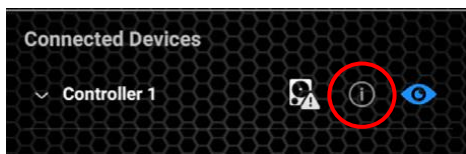
IV. The Output window will show the progress of the update process.



V. At the end of the update process, the PINE Controller needs to be restarted by disconnecting and reconnecting the power supply.

The controller should now boot up again as normal and will have the newest firmware installed.

VI. The currently installed firmware version of the controller can be seen by pressing the **i** Symbol under the “Connections” section of the App.

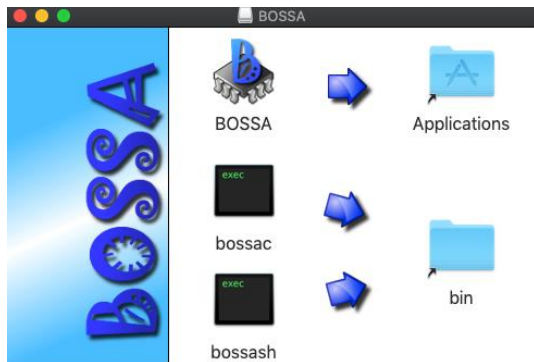


4. Updating on Mac OS X

For Mac OS X, you can use a 3rd party software called BOSSA to update the firmware of the PINE Controller.

Go to the Downloads section on our website to download the BOSSA software for Mac OS X.

Install the software by dragging the necessary files to the indicated locations as shown in the image below. You might need to give permission to install 3rd party apps during the installation process.



After installing, launch the BOSSA software



For some versions of Mac OS X (e.g. Mojave), you will receive an error message, which will prevent you from launching the BOSSA software. In this case, do the following steps:

- a. Open the Terminal Application  on your mac and copy/paste the following line:

```
/usr/bin/ruby -e "$(curl -fsSL https://raw.githubusercontent.com/Homebrew/install/master/install)"
```

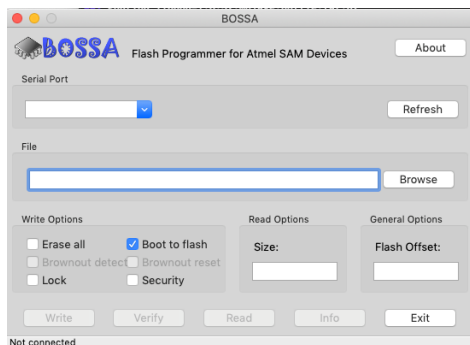
Follow the instruction in the terminal window. You have to confirm some things by pressing enter or giving your log-in password.

- b. After the above step has concluded, type the following into the terminal prompt and press enter:

```
brew install wxwidgets
```

Follow any instructions in the terminal window.

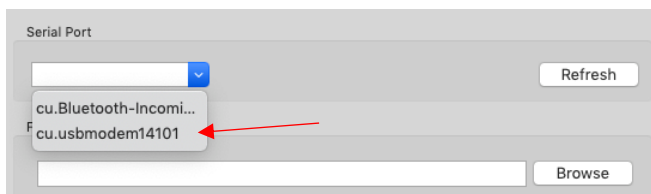
Once you are able to launch the BOSSA software, you will see the following window:



- I. With your PINE Controller still connected via USB to your computer (and powered over the DC connector), launch the Updater Utility.

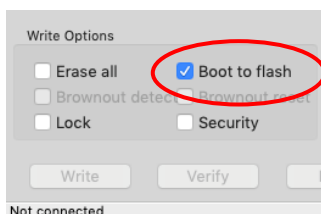
If you disconnected power from the controller after activating the Update Mode over the App, always first connect the USB cable to the controller and your computer, then connect the power supply.

- II. Click the refresh button. When you now expand the Serial Ports list you should see something like the following:



Select the entry which contains the “usbmodem” text.

- III. Download the newest firmware file from our Downloads section and select it with the “Browse” option in the BOSSA Software.
- IV. Make sure you have the “Boot to flash” checkbox activated.



- V. Click the “Write” Button to start the update process.
- VI. At the end of the update process, the PINE Controller needs to be restarted by disconnecting and reconnecting the power supply.

The controller should now boot up again as normal and will have the newest firmware installed.

- VII. The currently installed firmware version of the controller can be seen by pressing the **i** Symbol under the “Connections” section of the App.

